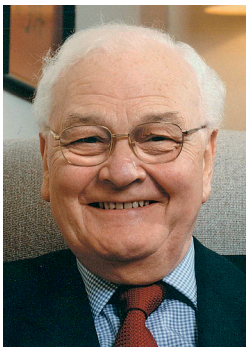
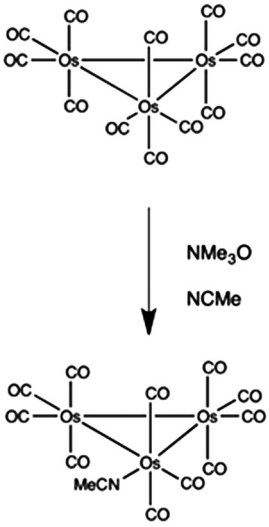


Jack Lewis

Jack Lewis, Professor the Lord Lewis of Newnham (1928–2014)

On July 17, 2014, Jack Lewis, formerly Professor of Inorganic Chemistry at the University of Cambridge and member of the House of Lords, passed away at the age of 86. He was widely recognized as one of the father figures of modern inorganic chemistry, having been one of the first to embrace the wide range of characterization methods that are now widely used on an everyday basis. His studies led to the enormous expansion in the synthesis of new transition-metal and organometallic complexes over the last six decades, and the application of physical techniques including spectroscopy, magnetic measurements, mass spectrometry, and X-ray diffraction has revolutionized the way that inorganic chemistry is carried out today.



Lewis spent his early life in Blackpool and was educated at the Barrow County Grammar School. He studied chemistry at the University of Nottingham and gained a first class BSc degree there. He remained in Nottingham for his PhD studies carried out on non-aqueous solvents under the supervision of Professor Cliff Addison. Lewis's intellect and flair for chemistry were quickly recognized and he held appointments in quick succession at the University of Sheffield, Imperial College London, and University College London, before moving to a chair at the University of Manchester, at the age of 33. During this period he formed very close links with Professor Sir Ronald Nyholm who had been responsible for the "renaissance of inorganic chemistry" in the 1950s. Lewis returned to University College London as a professor in 1967, before moving to the Chair of Inorganic Chemistry at the University of Cambridge in 1970, a position that he held until his retirement in 1995. He was elected as a Fellow of the Royal Society in March 1973. During his time in Cambridge he became the first Warden of the newly established Robinson College, a post that he held between 1975 and 2001. He was knighted in 1982, and was elected as a Life Peer to the House of Lords in 1989. In this role he represented science with his usual drive and enthusiasm and developed his interest in environmental issues. Notably, he chaired the Royal Commission on the Environment, the outputs from which have had a major impact on UK government policy.

Lewis's outstanding career has been recognized by numerous awards and honors, most notably the Davy Medal by the Royal Society in 1985, and its Royal Medal in 2004.

Over his career, Lewis made many seminal contributions to the area of inorganic chemistry, but perhaps his greatest contribution was in the area of metal–metal bonded complexes. His interest in this area started with his work on developing an understanding of magnetism, initially in mononuclear complexes and then developing this to study polynuclear species. This led him to study the chemistry of transition-metal carbonyl clusters, an interest that started in the late 1960s and continued to the end of his career. He, together with Brian Johnson and the team at Cambridge, developed the cluster chemistry of ruthenium and osmium. The aim of this research was to use the cluster carbonyls as model systems to mimic the reactivity of homo- and heterogeneous metal catalysts in industrial processes. The advantage of using the cluster models was that they could be fully characterized by using spectroscopic and diffraction techniques. This work led to new classes of high-nuclearity cluster complexes, containing up to 20 metal atoms, and a whole range of other mixed-metal cluster systems. Towards the end of his career, Lewis developed an interest in organometallic poly-yne oligomers and polymers. From this pioneering work, has come a range of new optoelectronic materials.

Lewis's contribution to inorganic chemistry has been enormous, but he will also be remembered as one of the most insightful scientists of his generation. His enthusiasm for chemistry, the breadth of his knowledge, and his speed of thought have been inspirational to his many students and colleagues alike. Working with Jack Lewis was an honor and a privilege. The support and encouragement that he and his wife, Lady Freddie, have given will be remembered and treasured by all who worked as a member of the Lewis group. Lewis's sphere of influence spanned science, education, and environmental politics, and he will be remembered as an extremely inspirational scientist and will be sadly missed by a very broad community.

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